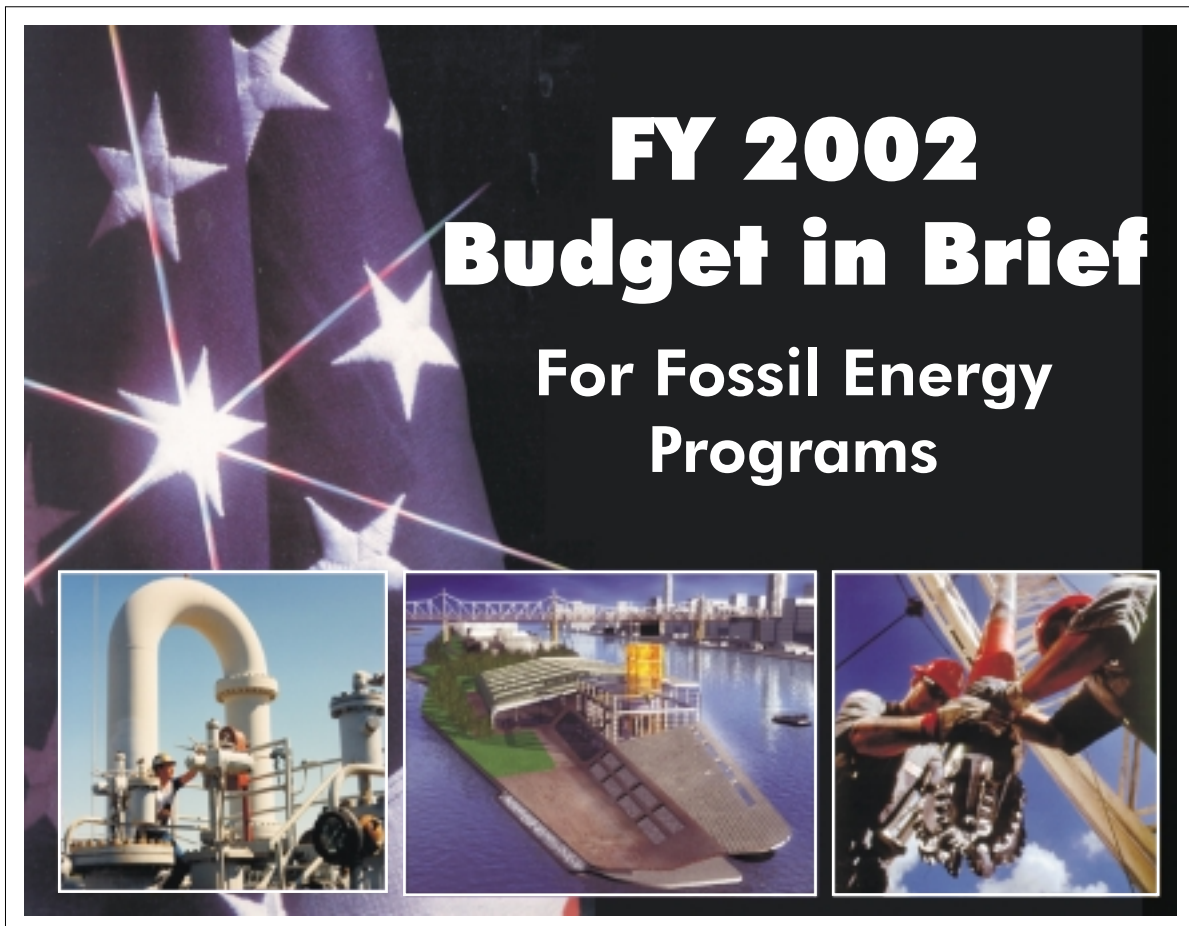


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Office of the Assistant Secretary
for Fossil Energy
U.S. Department of Energy

Two Presidential Initiatives

The FY 2002 budget for the Department of Energy's Fossil Energy program contains two Presidential Initiatives: (1) the Clean Coal Power Initiative, and (2) the Northeast Home Heating Oil Reserve.

Clean Coal Power Initiative: The FY 2002 budget will increase funding for the Clean Coal Power Initiative, a high priority effort that reflects President Bush's commitment to clean coal technology. In FY 2002, the Department will offer \$150 million in federal matching funds for a limited number of joint government-industry-funded demonstration of new coal-fired power technology. This is an increase from the \$95 million provided by Congress this year.

While DOE has maintained a core research program in clean coal technologies, there has been no federal effort since 1993 to move new innovations out of the research stage and into first-of-a-kind, full-scale tests – a necessary precursor to commercial acceptance. The President's Clean Coal Power Initiative will create new partnerships with the private sector to smooth the transition from smaller-scale research to market applications for technologies that can enhance the reliability and environmental performance of coal-fired power generators.

A recent analysis by one of the country's major utilities has indicated that the government's investment in clean coal technologies – amounting to about \$4 billion over the last 20 years – will return more than \$100 billion in direct economic benefits to this country and its consumers. The President's Clean Coal Power Initiative will add to these benefits, using industry input to help define the critical needs of the coal-fired power industry and then competitively directing federal matching funds to projects that can serve as models for both current and future power plant improvements.

Northeast Home Heating Oil Reserve: The second Presidential initiative is to fully fund the Northeast Home Heating Oil Reserve. The Reserve provides an important safety cushion for the millions of families in the Northeast that depend on affordable heating oil to stay warm in the winter. On March 6, 2001, Energy Secretary Abraham signed letters notifying Congress of the Administration's intent to establish the heating oil reserve on a permanent basis. Should extreme events conspire to threaten Americans in the Northeast, the Reserve stands ready to fill any fuel gap until private suppliers can resume their business activities. The FY 2002 budget provides \$8 million to continue leasing commercial terminals that hold the 2 million barrels of federally-owned, emergency heating oil.

FOSSIL ENERGY BUDGET SUMMARY

Dollars in Thousands

Activity	FY 2000 Approps.	FY 2001 Approps.	FY 2002 Request
Clean Coal Power Initiative	\$0	\$ 0	\$150,000
Fuels & Power Systems R&D			
- Power Plant Improvement Initiative	\$0	\$95,000	\$ 0
- Research and Development			
> Innovations for Existing Plants	14,393	20,102	18,000
> Low Emission Boiler System	1,955	0	0
> Indirect Fired Cycle	6,869	5,997	0
> Gasification Combined Cycle	34,415	35,134	35,000
> Pressurized Fluidized Bed	11,971	12,175	8,000
> Advanced Turbines	43,085	30,936	0
> Fuel Cells	43,373	52,584	45,124
> Sequestration R&D	8,941	18,746	20,677
> Fuels R&D	19,844	23,423	7,000
> Advanced Research	22,811	30,137	26,000
Total, Fuels & Power Systems R&D	\$207,657	\$324,025	\$159,801
Petroleum & Gas (Supply) R&D			
- Oil Technology			
> Exploration & Production	27,666	28,844	20,350
> Reservoir Life Extension/Mgm't	14,305	14,662	4,849
> Environmental Protection	10,534	10,796	5,300
> Emerging Processing Technology	3,243	2,594	0
> Ultra Clean Fuels	0	9,978	0
- Gas Technology			
> Exploration & Production	13,893	14,221	9,350
> Gas Hydrates	2,887	9,938	4,750
> Infrastructure	977	8,110	5,050
> Emerging Processing Technology	9,919	10,146	250
> Environmental Protection	3,133	2,614	1,600
Total, Petroleum & Gas R&D	\$86,557	\$111,903	\$51,499
Other Research and Development	\$24,366	\$25,558	\$15,700
Program Direction, Plant & Capital Equip.	\$78,079	\$83,977	\$72,000
Total, Fossil Energy R&D	\$396,659	\$545,463	\$449,000
Clean Coal Technology (New BA)	-\$146,038	\$103,980	\$82,000
Strategic Petroleum Reserve			
- Facilities and Operations	158,396	\$156,637	\$161,000
- Northeast Home Heating Reserve	0	8,000	8,000
- Use of SPR Petroleum Account	0	-4,000	0
Total, Strategic Petroleum Reserve	\$158,396	\$160,637	\$169,000
Naval Petroleum & Oil Shale Reserves	0	1,596	17,371
Elk Hills School Lands Funds	0	36,000	36,000
Subtotal, Fossil Energy	\$409,017	\$847,676	\$753,380
Offsets	- 1,000	- 108,000	- 7,961
TOTAL, FOSSIL ENERGY	\$408,017	\$739,676	\$745,419

Fossil Energy Research, Development & Demonstration

Clean Coal Power Initiative

(Dollars in Thousands)	FY 2000	FY 2001	FY 2002
Clean Coal Power Initiative	\$0	\$0	\$150,000

Coal supplies 54% of the nation's current power demands. Virtually every sound energy forecast shows that coal will continue to supply around half of the nation's power through at least 2020 and probably beyond. Yet, coal-burning power plants must also comply with stringent environmental standards. The Clean Coal Power Initiative will create partnerships with the private sector to demonstrate innovations that will allow coal-fueled power plants to meet environmental regulations, while potentially increasing their power output, without imposing large new financial burdens on ratepayers. The Administration is requesting \$150 million for the federal share of a limited number of joint government-industry funded tests of new technologies at scales large enough for companies to make commercial decisions. The Department will hold a national competition to select industry proposals. The private sector will be required to finance at least 50% of a winning project's cost.

Fuels and Power Systems R&D

(Dollars in Thousands)	FY 2000	FY 2001	FY 2002
Power Plant Improvement Initiative	\$0	\$95,000	\$ 0
Central Systems			
> Innovations for Existing Plants	14,393	20,102	18,000
> Low Emission Boiler System	1,955	0	0
> Indirect Fired Cycle	6,869	5,997	0
> Gasification Combined Cycle	34,415	35,134	35,000
> Pressurized Fluidized Bed	11,971	12,175	8,000
> Advanced Turbines	43,085	30,936	0
Distributed Generation Systems			
> Fuel Cells	43,373	52,584	45,124
Sequestration R&D	8,941	18,746	20,677
Fuels			
> Transportation Fuels & Chemicals	6,928	7,558	5,000
> Solid Fuels & Feedstocks	4,232	4,291	2,000
> Advanced Research	2,160	4,889	0
> Steelmaking	6,524	6,685	0
Advanced Research	<u>22,811</u>	<u>30,137</u>	<u>26,000</u>
Total, Fuels and Power Systems R&D	\$207,657	\$324,025	\$159,801

The \$159.8 million budget request is a 30% reduction from the current year. Within this funding level, we have concentrated our efforts on research that will:

- (1) directly support the Clean Coal Power Initiative, both immediately and over the 10-year life of the President's clean coal commitment,
- (2) provide new, more reliable power systems for the joint Fossil Energy/Energy Efficiency effort to develop distributed energy resource technologies (for the localized generation and use of power),
- (3) expand the menu of options for managing carbon gases by developing affordable carbon sequestration technologies, and
- (4) continue research into cleaner fuels for tomorrow's automobiles and trucks.

Innovative Emission Controls for Existing Plants: America has made remarkable progress in cleaning its air due largely to new technology. Coal use, for example, has doubled since the early 1970s but emissions of sulfur and nitrogen pollutants are down 70% and 45%, respectively. Yet, further challenges remain, especially in addressing such concerns as emissions of mercury, microscopic airborne particles, and further reductions in nitrogen oxide emissions. For mercury, no practical control technology now exists to significantly mitigate emissions from a broad range of power plant configurations. In addition, there may be opportunity for innovative, low cost technologies that address two or more pollutants simultaneously. The Fossil Energy program is developing technologies that can achieve future emission limits at costs far below what industry would pass on to consumers using today's technology. This is particularly important as support grows for an integrated emission reduction strategy that would sharply reduce key pollutants in exchange for long-term regulatory certainty.

Our FY 2002 budget contains \$18 million for these efforts, a 10% reduction from the current year.

Low Emission Boiler System: This program is drawing to a close as progress is being made by the Cornbelt Energy Cooperative to incorporate the technology into the first coal-fired generating plant to be sited in Illinois in the last 15 years. The 91-megawatt generating plant will be built on land owned by Turris Coal company and is projected to use approximately 370,000 tons of coal per year from the company's Elkhart mine in Logan County.

The federal cost-sharing commitment to this project has been fully funded in prior year budgets, and no new funding is needed.

Vision 21: *Vision 21* is the core of our long-range power research program. It draws from several budget areas, including gasification combined cycle, pressurized fluidized bed combustion, fuel cells, and advanced materials and computational research. Through this program, we believe it is possible to develop a new type of power facility that will virtually eliminate environmental concerns over the future use of fossil fuels.

A *Vision 21* plant would be fueled by coal, or natural gas, or perhaps biomass or municipal waste. It would emit virtually none of today's air pollutants and produce no harmful solid or liquid wastes. This extraordinary achievement could ensure that America – and other countries – benefit from the full potential of their available energy resources without compromising environmental goals. A complete *Vision 21* prototype is 10 to 15 years into the future, but many of the critical technology modules are already taking shape, and some are likely to be adopted by industry in the next few years.

In FY 2002, we propose to fund *Vision 21*-related efforts at \$37.5 million. The request is about \$14 million below the FY 2001 budget due primarily to elimination of turbine research and the indirectly fired cycle program.

Carbon Sequestration: While the President believes it is in the nation's best energy and economic interests not to seek mandatory reductions in carbon dioxide emissions, the Department recognizes the importance of continuing to develop lower cost options for reducing the buildup of greenhouse gases. Voluntary emission reductions, for example, could become much more attractive if low-cost carbon management options result in commercial benefits – for example, injecting carbon dioxide from power plants into oil fields or coal seams to produce marketable crude oil or natural gas. If more emission reductions are needed in the future, research must be conducted now so that lower cost sequestration options are available.

In FY 2002, we propose to increase funding for carbon sequestration research to \$20.7 million, a 10% increase that will enable the first limited field tests for the most promising approaches.

Advanced Gas Turbines: After successfully completing a joint government-industry program to develop a "breakthrough" utility-scale (~400 megawatts) gas turbine, the Department is proposing no new funding for advanced turbine research. With gas turbines expected to dominate demand for new power generators throughout this decade, there is significant incentive for industry to continue to advance turbine technology and to develop new turbines that meet emerging market needs.

Fuel Cells: Our research into fuel cells focuses on lower-cost, high performance units that can provide localized power supplies for factories, hospitals, military installations, and other distributed power applications. (The complementary program underway in the Office of Energy Efficiency is developing fuel cells for vehicular and home use.) At modular scales of 5-kilowatts to 1-megawatt or more, the advanced fuel cells we are developing could be in growing demand as businesses and factories look for more reliable ways to generate premium-quality electric power onsite.

A high priority in this program will be to begin completing efforts that represent more than 20 years of development and are within 1 to 2 years of achieving their objectives. We will also allocate a smaller portion of the budget to the much longer-range future of fuel cells. The focus will be to co-fund competitively selected industrial teams that will develop new types of all-solid-state fuel cells that can break through the cost barrier currently limiting widespread market acceptance.

The \$45.0 million budget request for fuel cells represents a 14% decrease from the current program.

Fuels R&D: In FY 2002, the \$7 million budget request will support research to reduce the cost and broaden the range of feedstocks that can be processed into clean transportation fuels suitable for tomorrow's high-fuel-efficiency vehicles. Funding is requested for the continued development of improved ceramic membranes for converting natural gas into synthesis gas that can be chemically recombined into a variety of clean liquid fuels. A small portion of this budget will also be used to support a university-industry consortium that is developing ways to use coal to produce high-value carbon products.

The Department does not propose to continue funding for developing new fuel processing approaches for producing ultra low-sulfur diesel and gasoline. The President has decided not to relax the requirements for cleaner automotive fuels. Industry now understands the need to meet the new standards, and this will create an incentive for private sector research into cleaner fuels.

The funding level proposed for FY 2002 is a 70% decrease from the current level of effort.

Advanced Research: The FY 2002 request for Advanced Research is \$26.0 million, which funds two types of activities. The first is a set of crosscutting studies and assessment activities in environmental, technical and economic analyses, coal technology export and international program support. The second includes crosscutting fundamental and applied research programs that focus upon developing the technology base in the enabling science and technology areas that are critical to the successful development of both superclean, very high efficiency coal-based power systems and coal-based fuel systems, with greatly reduced or no net emissions of CO₂. These systems are encompassed in the *Vision 21* energy plant of the future. Advanced Research projects seek a greater understanding of the physical, chemical, biological and thermodynamic barriers that limit the current use of coal and other fossil fuels.

Petroleum and Natural Gas (Supply) R&D

(Dollars in Thousands)	FY 2000	FY 2001	FY 2002
Oil Technology			
> Exploration and Production	27,666	28,844	20,350
> Reservoir Life Extension/Mgm't	14,305	14,662	4,849
> Environmental Protection	10,534	10,796	5,300
> Emerging Processing Technology	3,243	2,594	0
> Ultra Clean Fuels	0	9,978	0
Natural Gas Technologies			
> Exploration and Production	13,893	14,221	9,350
> Gas Hydrates	2,887	9,938	4,750
> Infrastructure	977	8,110	5,050
> Emerging Processing Technology	9,919	10,146	250
> Environmental Protection	3,133	2,614	1,600
Total, Petroleum & Natural Gas R&D	\$86,557	\$111,903	\$51,499

The United States has experienced a decline in its domestic oil production for most of the past 30 years, yet huge quantities of crude oil remain. In fact, nearly two-thirds of all the oil found in the history of the U.S. oil industry remains unproduced, and much of it is beyond the capabilities of today's petroleum industry. Greater access to oil-bearing resources will help slow the decline in domestic production, but for a growing percentage of the nation's oil producers, access to federal property will not be enough. For these producers – typically, the smaller, family-owned companies – there is also the need for access to better technology and for validating that improved technologies will perform as expected. These smaller companies now account for nearly 50% of the oil produced in the lower-48 states and almost two-thirds of the natural gas.

The program also supports wise stewardship of Federal lands; 50% of remaining, untapped technically and economically recoverable crude oil and gas resources are on federal lands. New technology can increase production from these properties, adding both new energy supplies and federal revenues.

The overall funding level for Petroleum & Natural Gas R&D reflects a significant decline compared to the current level of effort. This will require the program to be reoriented toward three major objectives:

- 1) A concentrated effort to transfer improved technologies and “best practices” to the nation's smaller independent firms in the very near-term – the next 1 to 5 years – and to lower the cost of environmental protection through a combination of risk assessments, technology development, regulatory streamlining, impact analysis, and improved federal-state-local coordination;
- 2) Much longer-term research -- looking 10 or 15 years into the future -- to develop technologies that could locate and produce oil and gas that are beyond the reach of current technologies or those that industry is developing, e.g., gas hydrates; and

- 3) Efforts to enhance the reliability and deliverability of the Nation's natural gas pipelines and gas storage facilities (reduced level of effort)

Oil Technology

Exploration & Production: In FY 2002, the focus will be on the new tools and techniques that oil producers in the next decade can use to explore for and produce hydrocarbons that are too difficult to extract today or are in environmentally sensitive regions that require "lower-impact" technologies (i.e., smaller surface "footprints" and reduced drilling wastes). For example, one of the FY 2002 activities will to demonstrate slimhole drilling technology under Arctic conditions (which will be coordinated by a newly created Arctic Research program). Another activity will study ways to locate and produce oil from highly fractured reservoirs or from ultra-deep deposits.

The FY 2002 request for this effort is \$20.4 million, a 29% decrease from current funding levels.

Reservoir Life Extension/Management: Much of the focus in this program will be on the much nearer term, with technology development and assistance targeted specifically for smaller, independent operators. No new, large-scale government-industry field demonstrations are planned; however, evaluation of past field trials in the nation's most endangered reservoirs will be completed and results transferred to private operators.

The FY 2002 request for this effort is \$4.8 million, a 67% reduction from this year's level.

Effective Environmental Protection: The budget request of \$5.3 million will fund technologies and practices that reduce the threat to the environment and decrease the cost of effective environmental protection in oil exploration, production, and oil processing. The program will collect data and analyze the effects of emissions and wastes from gas and oil operations and facilities. It will also support efforts to streamline environmental regulatory processes and provide data and analyses for environmental initiatives.

The FY 2002 request of \$5.3 million is a 51% reduction from the current funding level.

Emerging Processing Technology and Ultra Clean Fuels: These efforts, both of which in prior budgets focused on new technologies for low-sulfur transportation fuels, are not proposed for continuation in FY 2002. A smaller fuels-related effort, concentrating on membrane technology development for synthesis gas, is included in the Fuels and Power Systems R&D Program.

Natural Gas Technologies

In FY 2002, \$21.0 million is requested for Natural Gas Technologies. The Energy Information Administration, in its 2001 Annual Energy Outlook, projects over a 60% increase in domestic natural gas consumption between 2000 and 2020, with nearly two-thirds to be used for electric power generation. This requires increasing gas production from parts of the vast domestic resource base that are not currently economical to recover because of the geological setting, quality of the gas, or location relative to infrastructure.

With such a large growth anticipated in market demand, industry has a significant incentive to develop new technologies that can tap increasingly difficult gas resources. The federal program will be oriented toward activities that are well beyond the scope of the private sector, such as gas hydrates, or that address critical national priorities, such as our aging gas delivery infrastructure.

Exploration and Production: In this effort, new drilling and production technologies, along with advanced diagnostics and imaging systems, are being developed. A particular emphasis is on new technologies that can reduce costs, minimize environmental impacts, and limit damage to the gas-bearing formation (formation damage can prevent full recovery of the gas resource). For example, in FY 2002, the world's first microwave-hardened drill bit will be developed, along with a new generation of lighter-weight, high-strength composite drill pipes that might one day replace the traditional steel piping. Efforts will also focus on locating natural gas trapped in dense (low-permeability) and naturally fractured reservoirs. Being able to pinpoint these gas-bearing "payzones" more accurately can reduce the number of dry holes and lower the costs of operations in geologically difficult terrains.

The FY 2002 request for this area is \$9.3 million, a 34% decrease from the current budget.

Gas Hydrates: This vast source of ice-encased natural gas on the ocean floor and beneath the Arctic tundra is probably the best example of a gas resource that holds tremendous promise but is well beyond the scope of today's commercial activities. The \$4.8 million request, although less than half the current level, will permit limited experiments that can improve today's understanding of the resource and potentially lead to safe petroleum operations in hydrate areas.

Infrastructure: The Department remains concerned about the aging nature of the nation's natural gas delivery system. Therefore, \$5.1 million in the FY 2002 budget will be used to develop new sensor and repair technologies that can prevent dangerous leaks in natural gas pipelines and to develop advanced boring systems that will permit new pipelines to extend into areas previously inaccessible, for example beneath urban areas. Also included in this effort is the continued development of advanced gas storage technologies. The budget request reflects a 38% decrease from the FY 2001 level.

Emerging Processing Technology: Limited work on gas separation membranes has been transferred to the Fuels portion of the Fuels and Power Systems R&D Program, and no new research is proposed for gas-to-liquids, low-quality gas upgrading or coal mine methane production. The \$250,000 included in this budget item will meet the U.S. funding commitment to the International Center for Gas Technologies, a technology transfer organization.

Effective Environmental Protection: The Effective Environmental Protection program request is \$1.6 million. The program works to lower the cost of environmental protection through a combination of risk assessment technology development, regulatory streamlining, impact analysis, and facilitating dialogue that attempts to achieve consensus among affected parties on ways to balance the need to develop the Nation's energy resources with the maintenance of our environmental values. The FY 2002 funding level would be about 39% below the current budget.

Other Research and Development

(Dollars in Thousands)	FY 2000	FY 2001	FY 2002
Cooperative Research & Development	7,193	8,071	0
Advanced Metallurgical Research	5,000	5,214	5,200
Environmental Restoration	10,000	9,978	9,500
Import/Export Authorization	<u>2,173</u>	<u>2,295</u>	<u>1,000</u>
Total, Other Research & Development	\$24,366	\$25,558	\$15,700

Among the other Fossil Energy research and development efforts in the FY 2002 budget are (1) \$5.2 million to continue advanced metallurgical activities at the Albany (OR) Research Center, including efforts that are helping to develop better materials for the Vision 21 concept, and to study new carbon sequestration approaches; (2) \$9.5 million for corrective actions at Fossil Energy R&D facilities to meet environmental, health and safety requirements and for other locations where environmental remediation is necessary; and (3) \$1.0 million for regulatory activities involving natural gas imports and exports, exports of electricity, and the construction and operation of electric transmission lines which cross U.S. borders with Mexico and Canada.

No funding is requested to continue the cooperative research and development efforts. DOE policy is to have funding allocated on a competitive basis. Since this portion of the budget provides earmarked funding to two institutions – the Western Research Institute in Laramie, Wyoming, and the University of North Dakota Energy and Environmental Research Center in Grand Forks, ND – without competition, funding could not be supported in a limited budget.

R&D Program Management

(Dollars in Thousands)	FY 2000	FY 2001	FY 2002
Headquarters Program Direction	16,016	16,930	14,700
Field Program Direction	59,463	63,156	55,300
Plant and Capital Equipment	<u>2,600</u>	<u>3,891</u>	<u>2,000</u>
Total, R&D Program Management	\$78,079	\$83,977	\$72,000

This budget category provides for salaries, benefits and overhead expenses at the Fossil Energy program headquarters and the National Energy Technology Laboratory (with sites in Morgantown, WV, Pittsburgh, PA, and Tulsa, OK). Currently, this budget provides for 110 federal headquarters employees and 339 management and administrative (“indirect”) full-time equivalent employees at the National Energy Technology Laboratory. The FY 2002 budget request will require reductions in staff levels to 80 positions at headquarters and 316 management and administrative employees in Fossil Energy field offices.

Strategic Petroleum Reserve

(Dollars in Thousands)	FY 2000	FY 2001	FY 2002
Strategic Petroleum Reserve			
> Storage Facilities Operations	\$144,000	\$140,672	\$144,009
> Management	14,396	15,965	17,000
Northeast Home Heating Oil Reserve	0	8,000	8,000
SPR Petroleum Account Transfers	0	-4,000	0
Total, Strategic Petroleum Reserve	\$158,396	\$160,637	\$169,009

Strategic Petroleum Reserve: The Strategic Petroleum Reserve provides the United States with strategic and economic protection against disruptions in oil supplies. The FY 2002 budget request will maintain the Reserve's readiness to respond to a Presidential directive in the event of an energy emergency. During FY 2001, the inventory of 561 million barrels will provide 53 days of net import protection. By FY 2002, with the receipt of crude oil returned in the 2000 exchange initiative and all royalty-in-kind oil, the Reserve inventory is projected to grow to more than 591 million, its historically highest level. This level will also provide 53 days of net import protection (because oil imports continue to rise).

Recently, the Energy Department renegotiated the delivery dates for 23.8 million of the 30 million barrels of crude oil released in last year's exchange initiative. Under the original agreements, companies would return 31.35 million barrels later this year – the additional 1.35 million representing a premium in returning for obtaining crude oil when inventories were tight last year. Now, under the renegotiated contracts, which defer deliveries until December 2001 through January 2003, the Strategic Reserve will be replenished with 33.54 million barrels – 2.4 million more than originally anticipated. It may also be possible that delivery dates will be renegotiated for at least some of the oil currently scheduled to be returned this year, further adding to the emergency crude oil inventory at no additional cost to the taxpayer.

In FY 2002, partial funding (\$3 million) is included in the budget request to begin dealing with a recurrence of gas buildup in the Reserve's crude oil.

Northeast Home Heating Oil Reserve: The Energy Department stockpiles 2 million barrels of emergency heating oil in commercial facilities operated by private industry. Currently, 1 million barrels are stored in New York Harbor and 1 million barrels are stored in New Haven, Connecticut. Three companies -- Amerada Hess Corp., Morgan Stanley Capital Group, and Equiva Trading Company -- store the oil at their terminals, rotate the oil to maintain DOE specifications, and manage the delivery of the heating oil in the event of an approved use of the reserve. DOE intends to exercise the optional 1-year extension clause in contracts with these companies. The FY 2002 budget continues operation of the Reserve with support for leasing commercial storage space, quality assurance, auditing, oil sampling and inspections.

Naval Petroleum Reserves

(Dollars in Thousands)	FY 2000	FY 2001	FY 2002
Reserves Nos. 1 and 2	\$6,900	\$4,834	\$5,144
Reserve No. 3	8,340	9,948	7,235
Program Direction	6,000	8,039	9,992
Use of Prior Year Balances	<u>-21,240</u>	<u>-20,775</u>	<u>-5,000</u>
Total, Naval Petroleum Reserves	\$0	\$1,596	\$17,371
Elk Hills School Lands Funds	\$0	\$36,000	\$36,000

DOE manages and operates two oil field properties: NPR-2, near Bakersfield, California, and NPR-3, near Casper, Wyoming. These are the last remaining Federally-owned properties in the Naval Petroleum and Oil Shale Reserves, originally established in the early 1900s as a source of fuel for U.S. naval vessels. Since 1976, most of the properties have been operated by the government or leased (in the case of NPR-2) as commercial ventures. These properties produced \$9.5 million in revenues in FY 2000 and are expected to maintain revenues between \$6.9 and \$9.0 million through FY 2001 and 2002. At the NPR-3 site, DOE also operates a public/private oil and gas field testing station, the Rocky Mountain Oilfield Testing Center (RMOTC).

The FY 2002 budget includes: (1) \$8.8 million for equity redetermination, environmental remediation and contract closeout of the Elk Hills property; (2) \$3.58 million for operating the Naval Petroleum Reserve-2 and -3, (3) \$3 million for operating RMOTC, (4) \$1.2 million for plugging and abandoning wells and environmental remediation at NPR-3; and (5) \$5.8 million for federal staffing salaries and benefits.